



Best Barns USA Assembly Book

Revised July 6, 2015



Tahoe-R

12'x 20'

Manufactured by Reynolds Building Systems, Inc.

205 Arlington Drive

Greenville, PA 16125

724-646-3775

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IMPORTANT INFORMATION ABOUT YOUR SHED KIT

Thank you for purchasing our Tahoe shed kit. These instructions will construct a 12'x20' building. **If you received two books, use the one with the latest revision date.**

If you have any questions about assembling the kit, call 800-245-1577. If you are calling after normal business hours, call 724-866-HELP (4357) or email to help@barnkits.com.

Before you begin construction, be sure to study this assembly manual. Obtain a building permit and check all pertinent building code regulations.

Some 2x4 wall framing, siding and roof sheathing, along with the optional floor package will be supplied by a local supplier. The material breakdown is listed on the back page.

Our component kit does not include the shingles, giving you a choice of color and quality. The breakdown of the material you need to supply is listed on back page.

The door opening is for an 8' wide x 7' high garage door. You will need to order your garage door with a 6" low headroom kit.

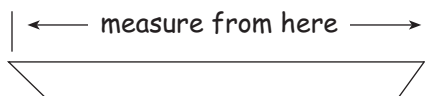
Some of the framing lumber was used in the shipping pallet. Unpack the material from the pallets, then unscrew the 2x4s. The bit for the screws is packed in the hardware bag. The 2x4s will be used for wall bracing.

The siding is primed. You will need to apply a finish coat using latex acrylic paint. Paint the bottom edge of the siding, this is very important.

Stacking the boards, according to size, will make them easier to find when needed. **Do Not** discard any material, *no matter how small*, until your building is complete. Anything leftover may have been used as packing blocking.

Good luck with your project.

Bill Rinella, President



When measurements are given for a board length or width, it is from the longest side.

Tool List

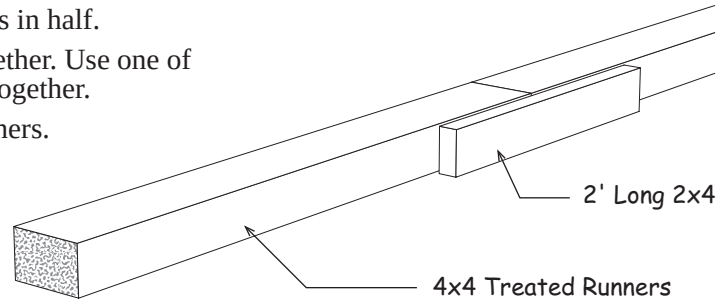
- | | |
|--|--|
| ☐ Hammer & Phillips Screwdriver | ☐ Power Drill/screwdriver |
| ☐ Framing Square & Level | ☐ Measuring Tape |
| ☐ Hand Saw | ☐ 2-8' Step Ladders |

Always wear safety glasses when cutting or nailing!

Optional Wood Floor System

Shown below is a typical wood floor. Depending on your area, the construction may have to be changed to meet local codes. The foundation size should be 12' - 0" x 20' - 0".

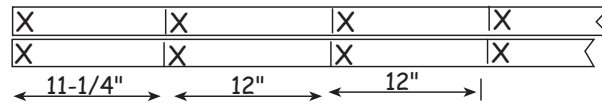
1. Cut (2) two treated 2x4-8' boards in half.
2. Butt 4x4-10' treated runners together. Use one of the 4' long 2x4s to secure them together.
3. Repeat to join the other 4x4 runners.



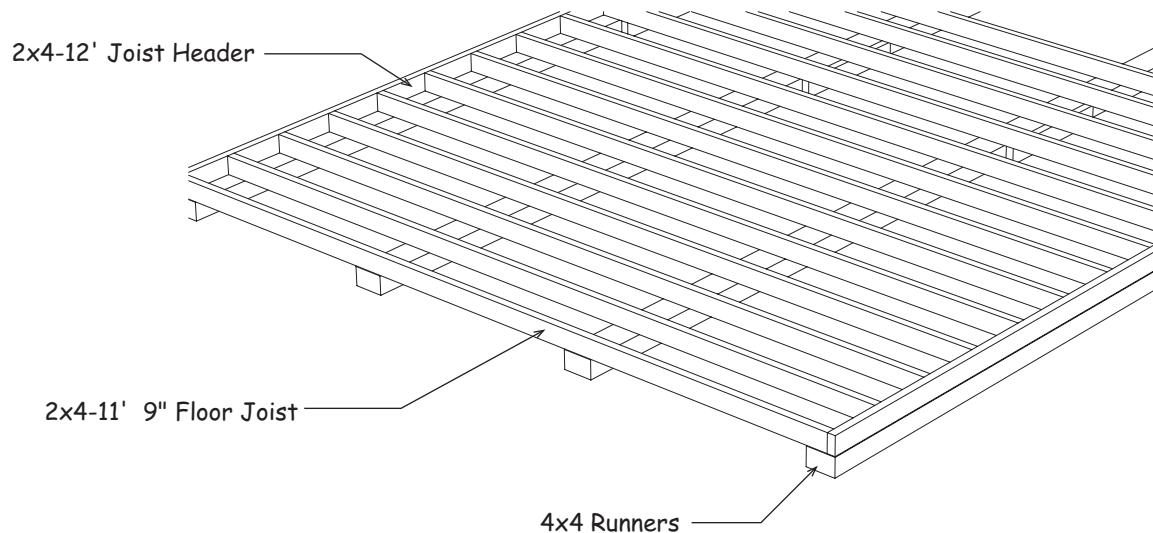
4. Cut (2) two 2x4-12' joist headers to 12' - 0".
5. Layout for 12" on center joist spacing. 'X' marks where floor joist will be placed.

Detail 1

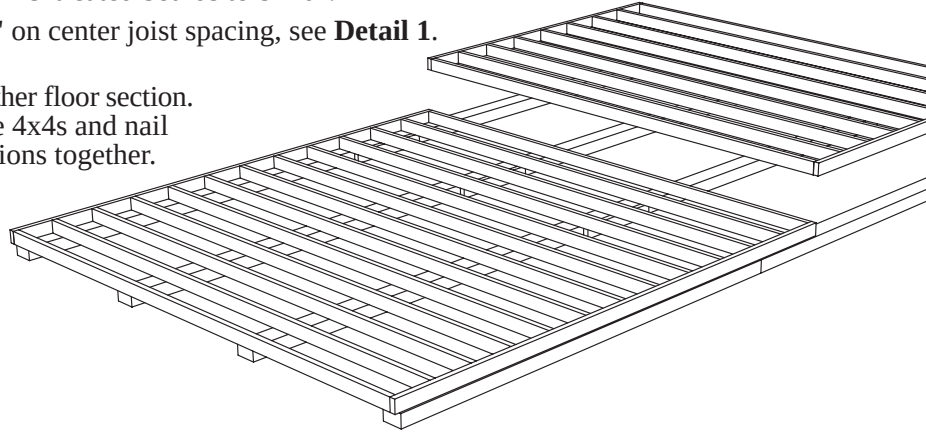
2x4 - 12' 0"
Joist Header



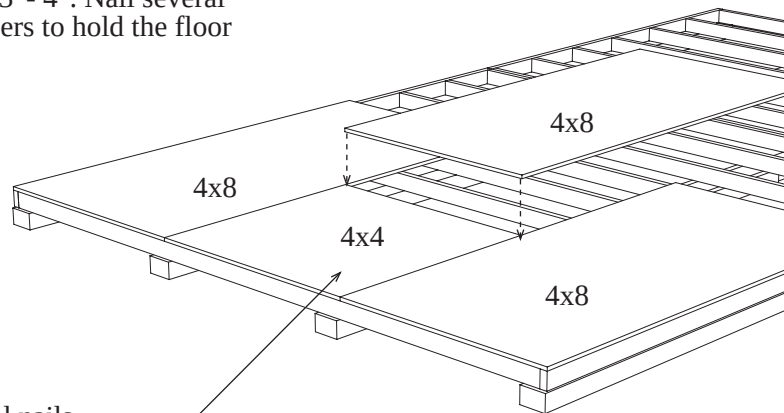
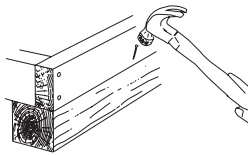
6. Cut all the 2x4-12' boards to 11'-9". These boards will be the floor joist. *Treated lumber may be thicker than 1-1/2". Take this into account when cutting the length of floor joists. Shorten joist measurements if necessary to obtain 12'-0" building width.*
7. Install floor joist boards between the joist headers. Install this section over the 4x4s.



8. Cut (2) two 2x4-8' treated boards to 8' - 0".
9. Layout for 12" on center joist spacing, see **Detail 1**.
10. Assemble another floor section.
Install over the 4x4s and nail
both floor sections together.



11. Square the floor. See note below. The angle measurement should be 23' - 4". Nail several floor joist to the 4x4 runners to hold the floor frame in place.



12. Install floor using 8d spiral nails.

Notes To Floor

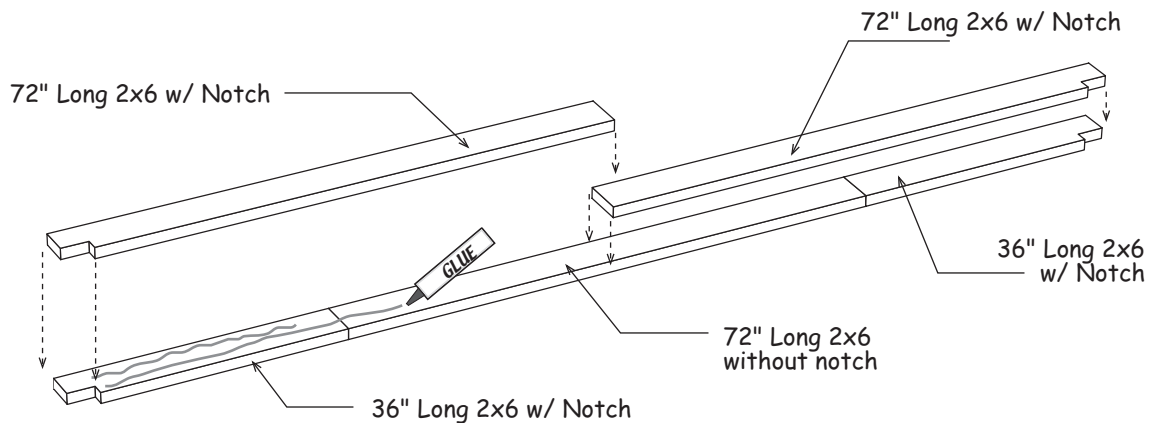
Material Description	12' x 20' shed
2x4 Treated	4 pcs. 8'
2x4 Treated	24 pcs. 12'
4x4 Treated Runners	8 pcs. 10'
Flooring 5/8" or 3/4"	8 pcs. 4x8
Screw Floor Nails	5 lb. 8d
Galv. Box Nails	5 lb. 16d

It is important that the floor be level and square. Square the floor as follows: before nailing the flooring, measure the floor diagonally (corner to corner). Then measure the opposite corners. These measurements will be the same if the floor is square.

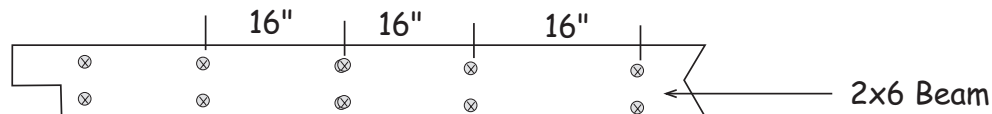
When using a concrete slab for a floor, use the same overall foundation measurements. Install foam sill sealer as a moisture barrier between the concrete and the wall plates. Foam sill sealer is available in rolls, 3-1/2" or wider.

Step 1 Assemble Loft Beams

1. Locate (2) two 36" long 2x6 boards with a notch on one end and a 2x6 board without a notch. Position these 2x6 boards on a flat surface as shown below.
2. Apply a coat of glue to the top surface using wood glue supplied in kit.
3. Locate (2) two 72" long 2x6 boards with a notch on one end. Install these 2x6 boards over the bottom boards.



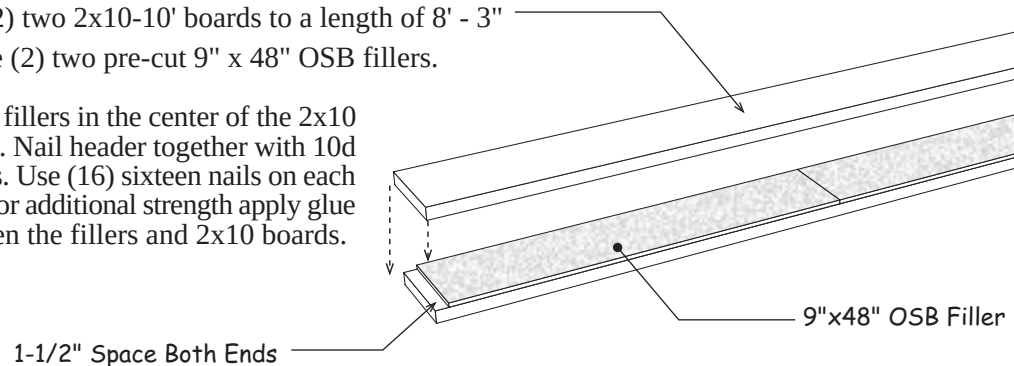
4. To provide additional strength, install 2-1/2" wood screws spaced 16" apart as shown below.



5. Repeat steps to assemble another 2x6 beam.

Step 2 Assemble Door Header

1. Cut (2) two 2x10-10' boards to a length of 8' - 3"
2. Locate (2) two pre-cut 9" x 48" OSB fillers.
3. Install fillers in the center of the 2x10 boards. Nail header together with 10d sinkers. Use (16) sixteen nails on each side. For additional strength apply glue between the fillers and 2x10 boards.



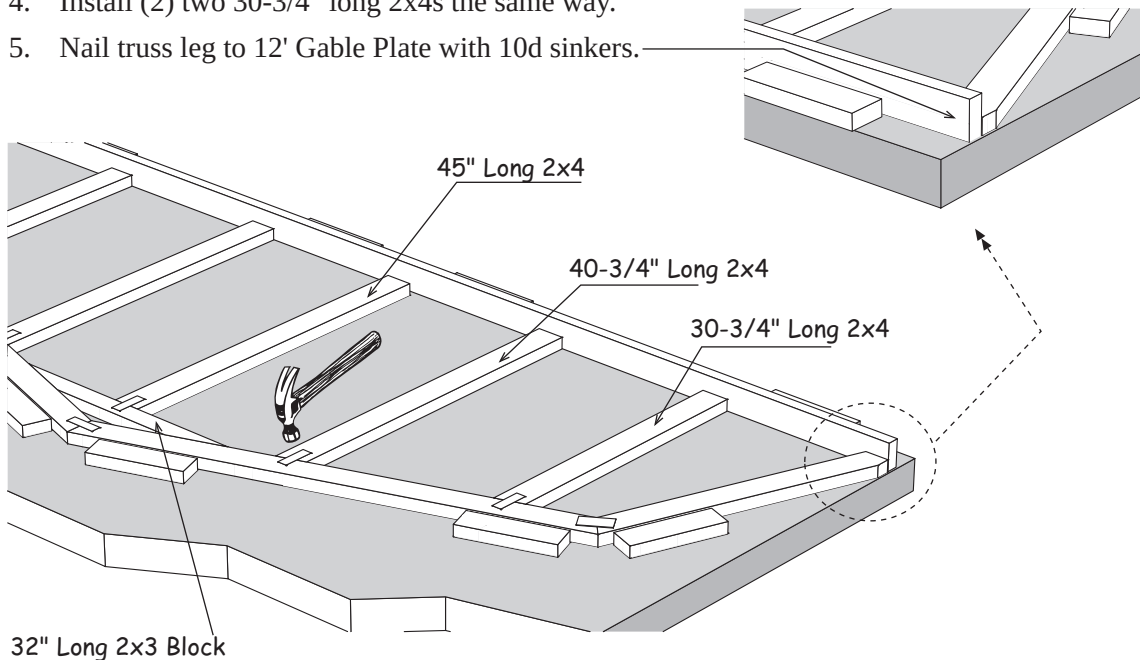
 Building Tip: To aid in the assembly of the trusses, temporarily screw 2x4 blocks to the floor. There are short 2x4s, *that may have an angle on one end*, supplied in kit. This will insure that all the trusses are assembled the same.

-
- Diagram illustrating the assembly of a roof truss structure. The main components and assembly steps are labeled:
- 32" Top Gusset**: A large, flat, rectangular piece used to connect the top of the truss legs.
 - Truss Half**: The main structural component of the truss, shown in two halves being joined.
 - Metal Plate**: A small, rectangular plate used to secure the truss half to the support.
 - 32" Long 2x3 Block**: A long, narrow block used to support the truss half.
 - 2x4 Block**: A smaller block used to support the truss half.
 - 2x4-12' Gable Plate**: A long, narrow plate used to support the truss half.
 - Do Not Fasten Truss Legs to the 12' Board**: A warning label indicating that the truss legs should not be fastened to the 12-foot board.
- The diagram shows a cross-section of the truss assembly, with a dashed line indicating the location of the 32" Top Gusset. An orange power drill is shown fastening the truss half to the support.

4. Nail the 2x3-32" board where the trusses meet at the top. Secure with a 32" wood gusset. Apply wood glue between the gusset and 2x4s. Nail gusset using (20) twenty 6d common nails.
5. Turn the truss over and install a gusset to the other side of the truss.
6. Repeat to assemble (8) eight more trusses.

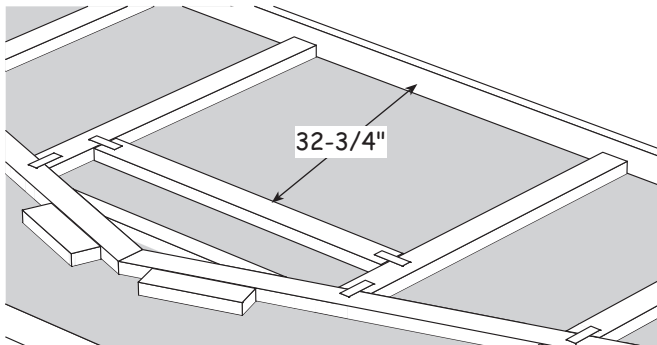
Step 4 Assemble Roof Gables

1. Position (2) two truss halves together and secure the top with a 1"x4" barbed metal plate. Nail a 32" long 2x3 board at the ridge to help secure the top.
2. Cut a 45" long 2x4 to length and install in the center of the gable. Secure the bottom by nailing through the plate with (2) two 10d sinkers. Secure the top with a barbed metal plate.
3. Install two 40-3/4" long 2x4 gable studs in the center of the gable frame. Secure the same procedure as the center 2x4. They should be spaced 42-3/4" apart, (+) or (-) 1/4".
4. Install (2) two 30-3/4" long 2x4s the same way.
5. Nail truss leg to 12' Gable Plate with 10d sinkers.



6. Repeat steps to assemble the front roof gable. **Read note below:**

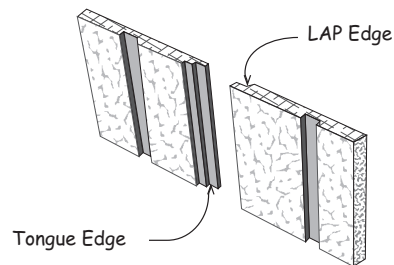
 *If you want the loft doors to open, repeat steps 1-6 substituting number 3 with directions below:*



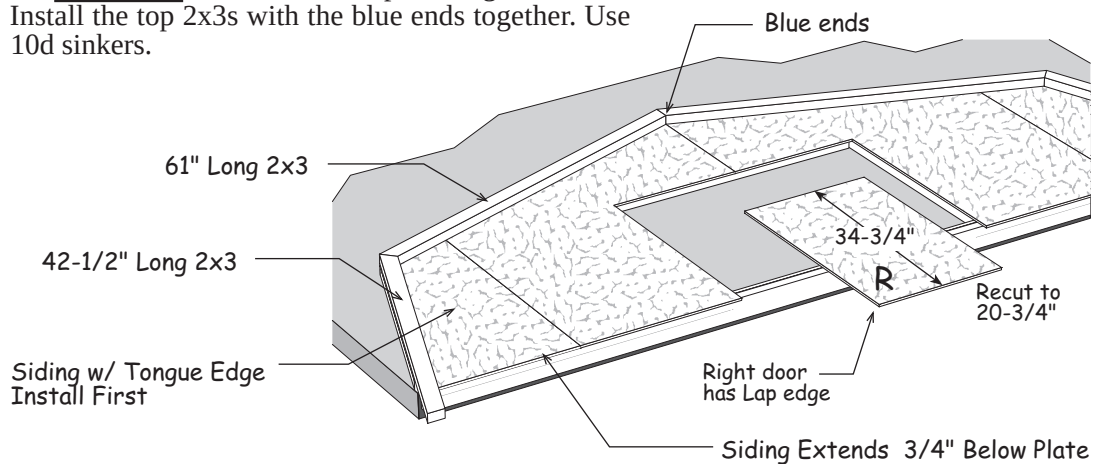
3. Cut a 45" long 2x4 gable stud and install between the center gable studs. Secure with 1"x4" metal barbed plates. Install this board 32-3/4" from the 2x4 plate.

Step 5 Side Front Roof Gables

To identify which edge we want you to use, we will refer to the edge as either the 'LAP' Edge or the Tongue Edge. Use 6d galv. nails where the 2x4s are flat and longer 8d nails when the 2x4s are on edge. Spaced nails 12" apart.

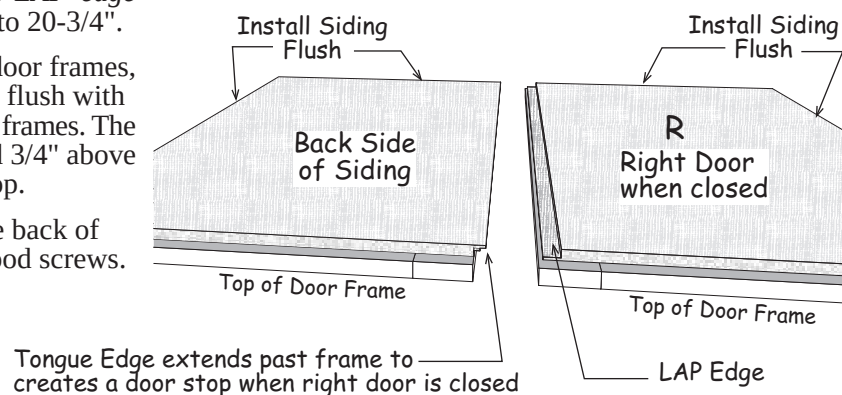


1. Remove 2x4 blocks and turn the front gable frame over. Install pre-cut siding on front gable. Siding should extend $\frac{3}{4}$ " below the bottom 2x4 plate. You can attach the loft door frames to the gable to create a decorative look or if you want the loft doors to open, cut the siding from the opening. Cut the siding flush with the sides of the opening. Cut siding length to $34\frac{3}{4}$ ". Mark the siding cut from the right siding panel with the letter 'R'.
2. Install (2) two 61" and (2) two $42\frac{1}{2}$ " long 2x3s on the front gable flush with the top of the gable frame. Install the top 2x3s with the blue ends together. Use 10d sinkers.



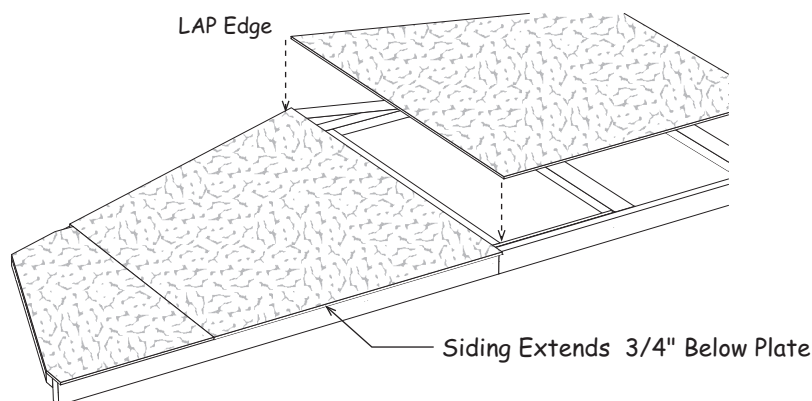
3. Recut the siding panel marked 'R'. *Measure from 'LAP' edge* and cut the width to $20\frac{3}{4}$ ".
4. Install panels on door frames, with the cut edges flush with bottom and side of frames. The frames will extend $\frac{3}{4}$ " above the siding at the top.

Screw through the back of siding with 1" wood screws.

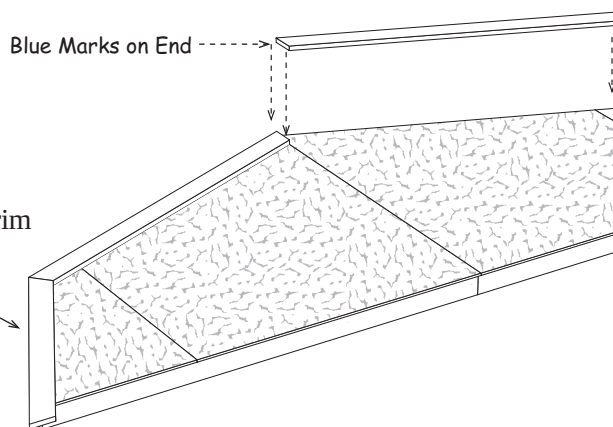


Step 6 Apply Siding and Trim to Rear Roof Gable

1. Install pre-cut siding on the rear gable frame.



2. Install (2) two 61" long 1x4 gable trim flush with the top edge of the gable. Install the ends with blue marks together. Install trim with 8d galv. nails.



3. Install (2) two 42-1/2" long 1x4 gable trim flush with the side edge of the gable.

Notes on assembling wall frames.

If installing the building on a cement slab cut the siding flush with the bottom plate.

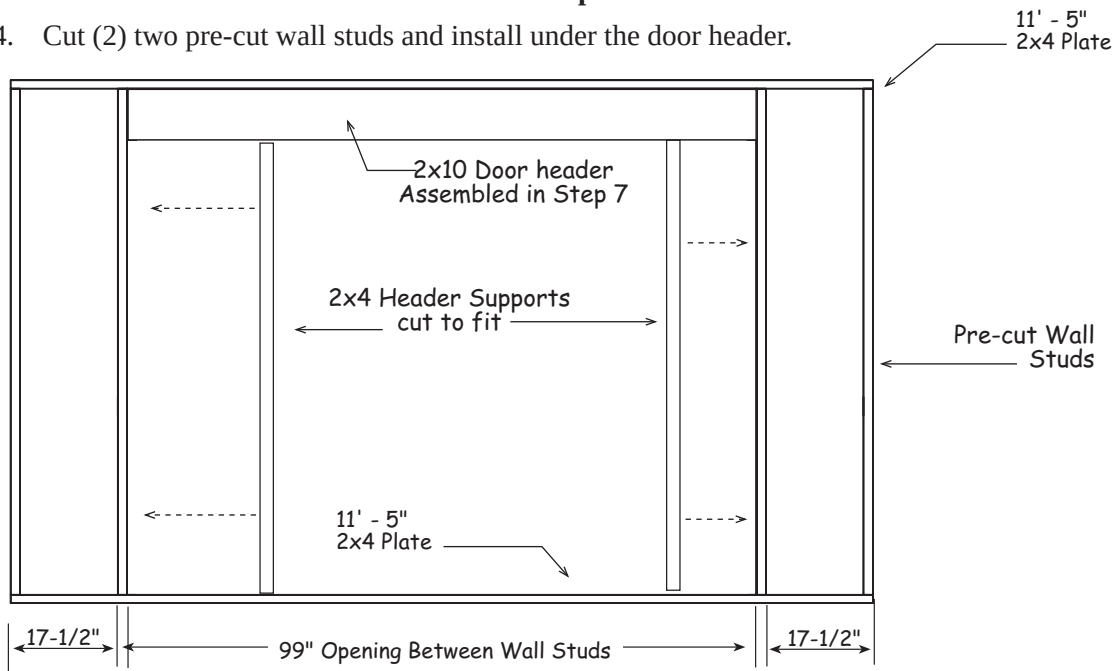
Square wall frame before installing siding. Measure diagonally (corner to corner). The measurements will be the same when the wall is square.

Pre-cut wall stud will measure 92-5/8" or 92-1/4" in length.

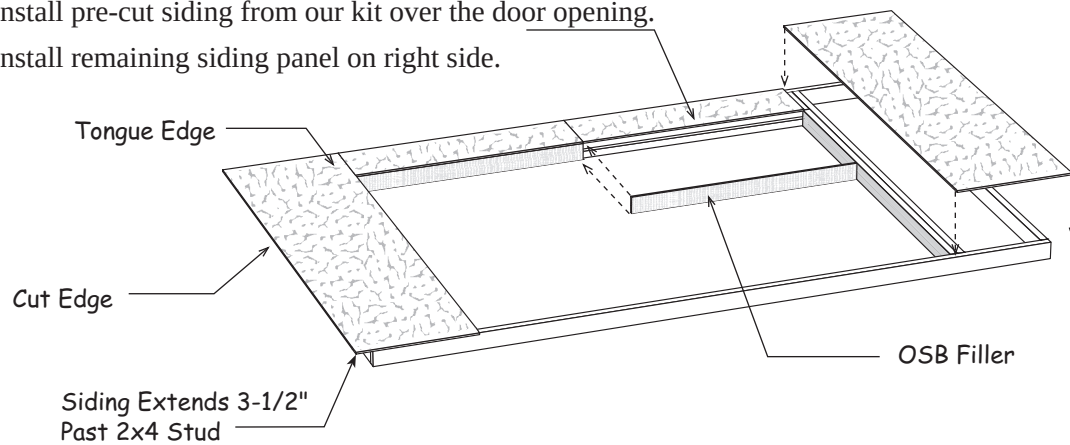
If you are installing the optional walk-in door see the instructions at **Step 24**.

Step 8 Assemble Front Wall

1. Cut (2) two 2x4-12' boards to 11'- 5" in length.
2. Install (4) four pre-cut wall studs between the plates as shown below.
3. Install the 2x10 door header assembled in **Step 7**.
4. Cut (2) two pre-cut wall studs and install under the door header.

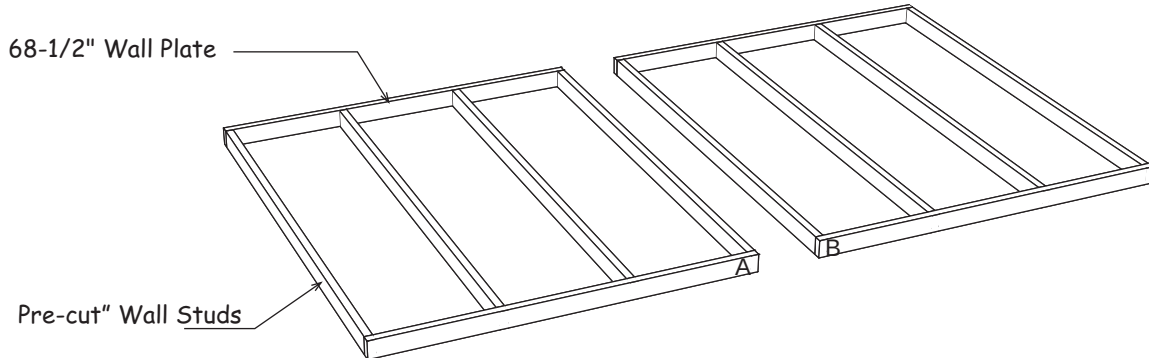
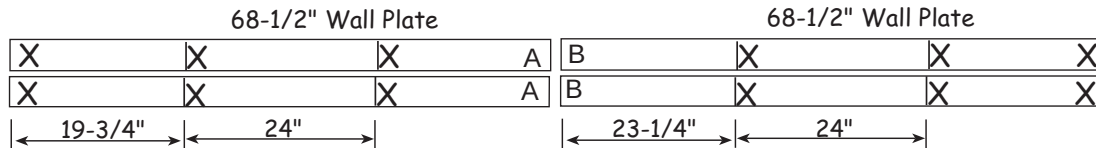


5. Cut a 4x8 siding panel in half and install the siding with the tongue edge on the left end. The siding will extend 3-1/2" beyond the end of the wall stud. Siding should extend 3/4" below the bottom plate unless installing building on concrete slab.
6. Install (2) two 3-1/2" x 48" OSB fillers under the door header.
7. Install pre-cut siding from our kit over the door opening.
8. Install remaining siding panel on right side.

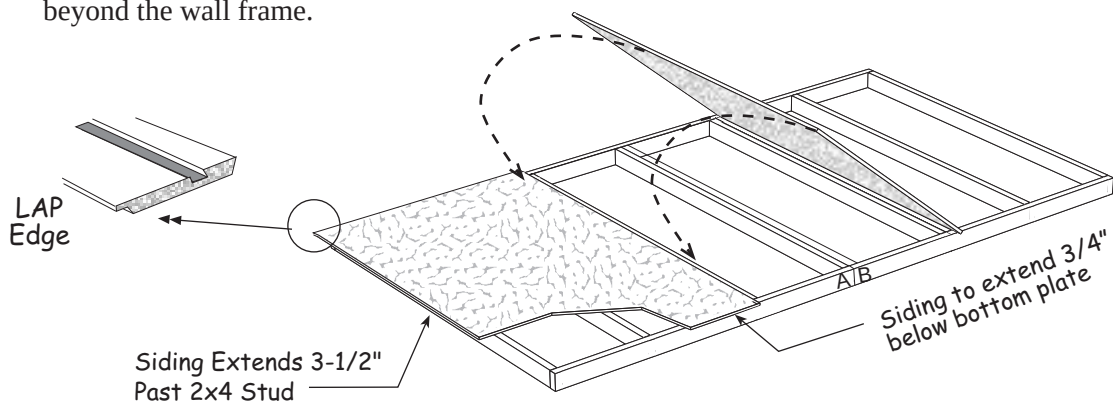


Step 9 Assemble Back Wall

1. Position (4) four 2x4x68-1/2" boards together and indicate with 'X' marks where the wall studs will be located. Mark the ends that will butt together with the letters 'A' and 'B'.
2. Install (8) eight pre-cut wall studs, between the 2x4 plates, over the 'X' marks and where the plates butt. Use (2) two 10d sinkers at each end of stud. Nail walls together using 10d sinkers.

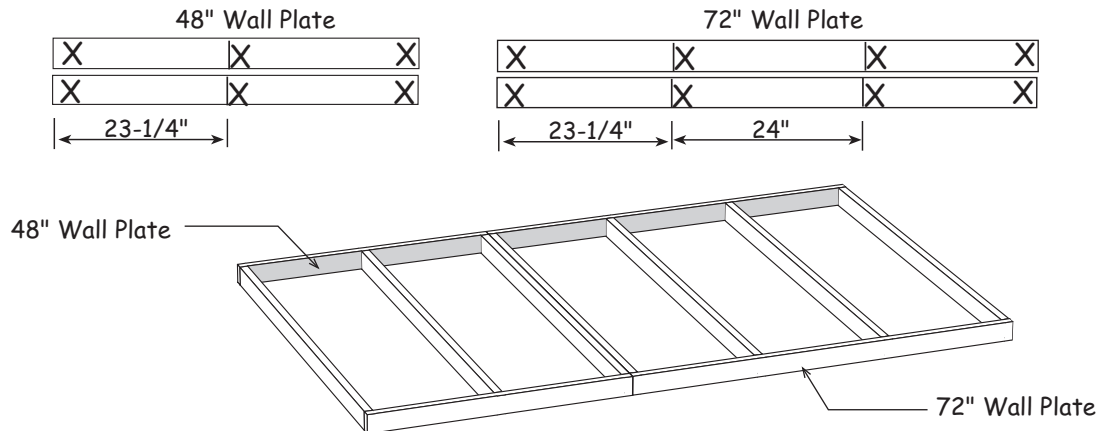


3. Install the 1st siding panel with the 'LAP' edge extending 3-1/2" past the wall frame. The bottom will extend 3/4" below the bottom plate. Tip: Use 3/4" trim board as a gauge.
4. Install the other siding panels. Cut the last panel to extend 3-1/2" beyond the wall frame.



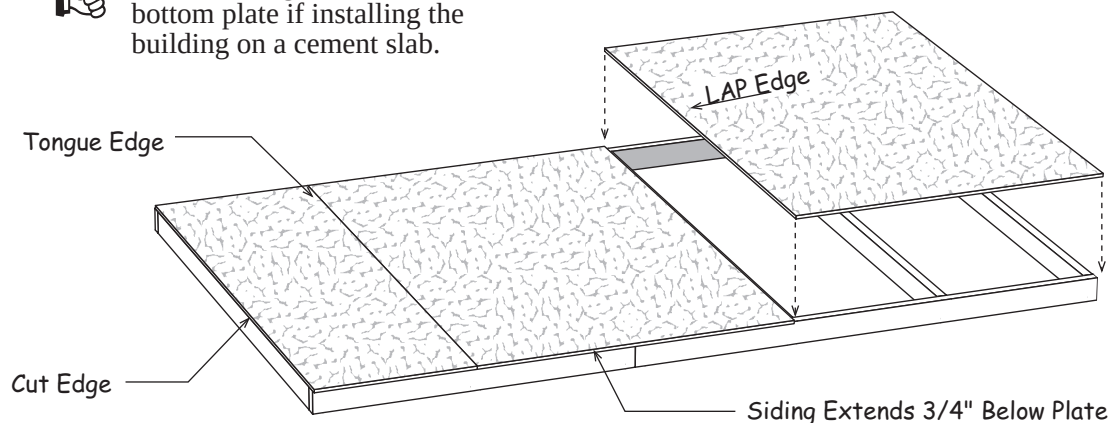
Step 10 Assemble Sidewalls

1. Position (2) two 2x4-48" boards and (2) two 2x4-72" boards together and indicate with 'X' marks where the wall studs will be located.



2. Install (7) seven pre-cut wall studs between the wall plates. Use (2) two 10d sinkers at each end of stud. Nail the frames together with 10d sinkers.
3. Repeat to assemble (3) three more 10' long sidewall frames. **You will need to cut (2) two 64" long 2x4s to a length of 48" to assemble the last 48" wall frame.**
4. Cut one of the 48" wide siding panels in half lengthways.
5. Select the 2' wide panel, *with the 'tongue' edge*, and install this panel with the 'cut' edge 'flush with the end of the wall and extending 3/4" below the bottom plate.
6. Install (2) two more siding panels.

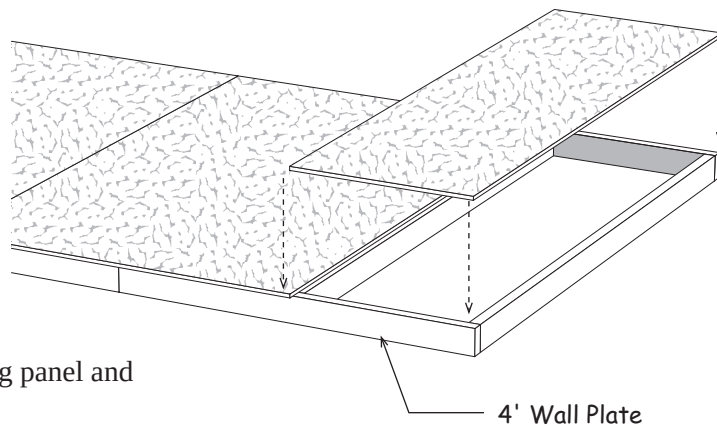
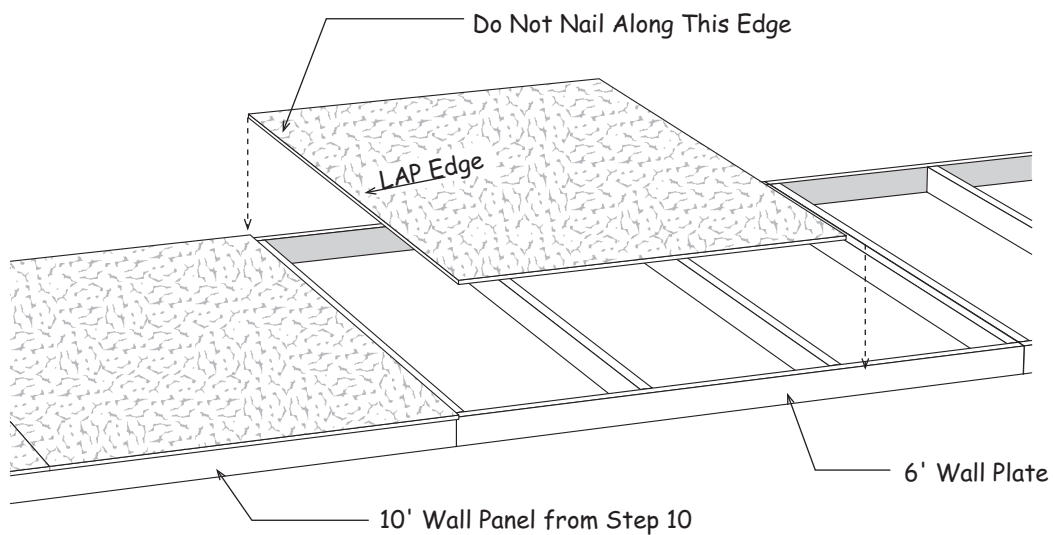
 Cut the siding flush with the bottom plate if installing the building on a cement slab.



7. Select (1) one of the 10' wall frames and repeat to apply siding to another sidewall 10' frame.

Step 11 Assemble Sidewalls Continued

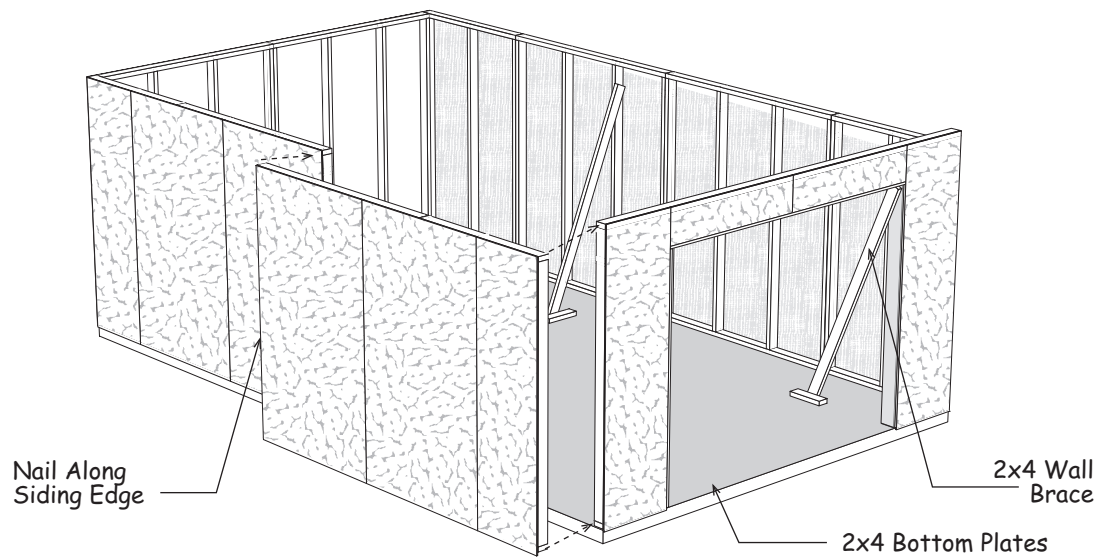
1. Select one of the 10' sidewalls assembled in **Step 10**. Butt a 10' wall frame against the wall with siding. **DO NOT** nail these frames together so they can be separated later.
2. Square the wall frame. Install a full width siding panel but do not nail along the long edge that overlaps the 10' wall frame. You can nail this edge after the wall panels are installed. This will enable you to separate the wall panels making them easier to handle.



3. Install another full width siding panel and the 2' wide siding panel.
4. Repeat to apply siding to the other 10' wall frame.

Step 12 Set Walls

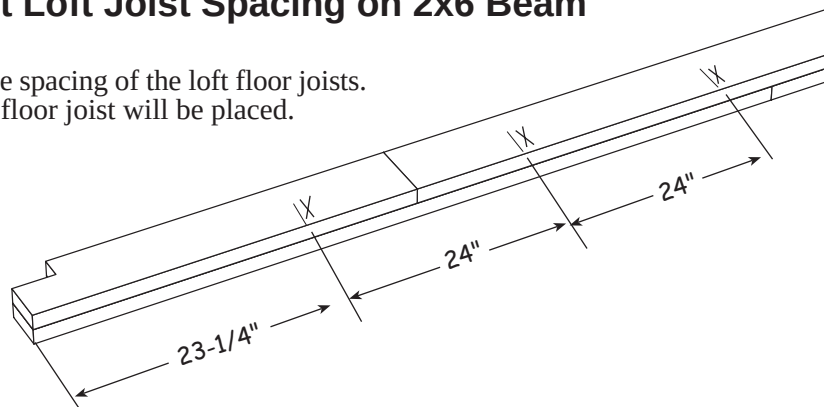
1. Set the back wall panel between the sidewalls. Secure wall panels together at the corners. Use (4) four 10d coated nails per corner. Nail wall panels to the floor. Nail through the bottom plate. Space 10d sinkers 24" apart.
2. Install the front wall frame between the sidewalls.
3. Nail along the siding edge where the sidewall siding panels overlap.
4. Remove the 2x4s from the shipping pallet and use them to brace the wall to hold them straight.



5. Cut and remove the bottom 2x4 in the door opening.

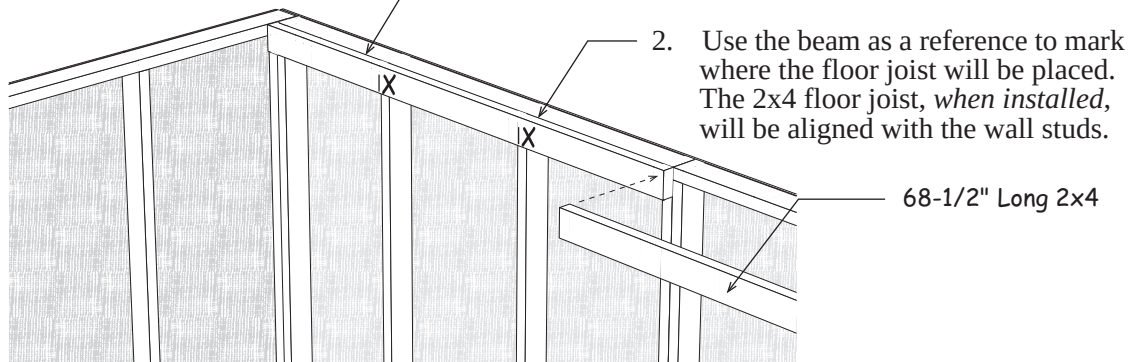
Step 13 Layout Loft Joist Spacing on 2x6 Beam

Layout both beams for the spacing of the loft floor joists. The 'X' marks where the floor joist will be placed.



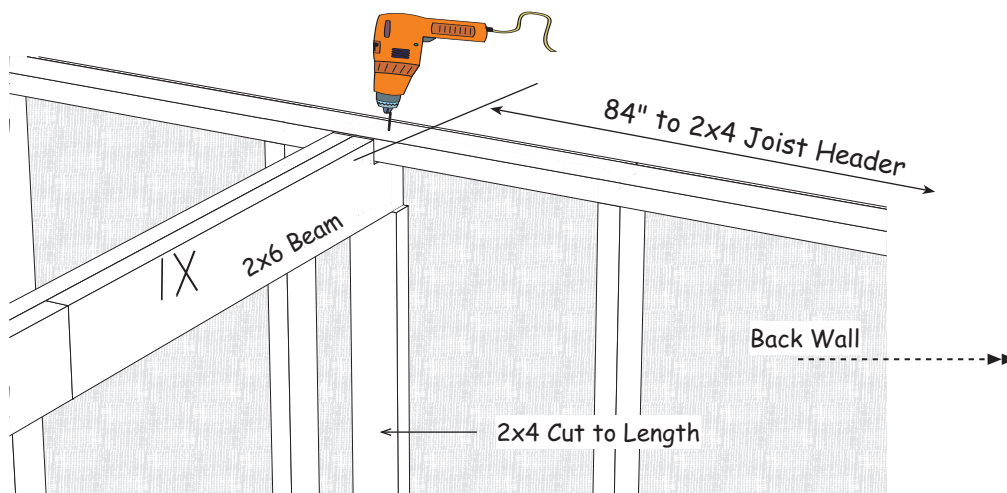
Step 14 Install Loft Joist Headers & 2x6 Loft Beams

1. Install (2) two 68-1/2" long 2x4s on the back wall to support the floor joist. Install the 2x4s flush with the top of the 2x4 wall plate. Secure to wall studs with 10d sinkers.



3. Repeat to install joist header support boards on the front wall.
4. Install the rear 2x6 beam, 84" from the 2x4 joist header boards, with the 'X' marks on the beam facing the back wall. You can use a 2x4-7' board as a gauge to properly space the beam. Refer to **Step 15** to see how the loft floor joist will be installed.

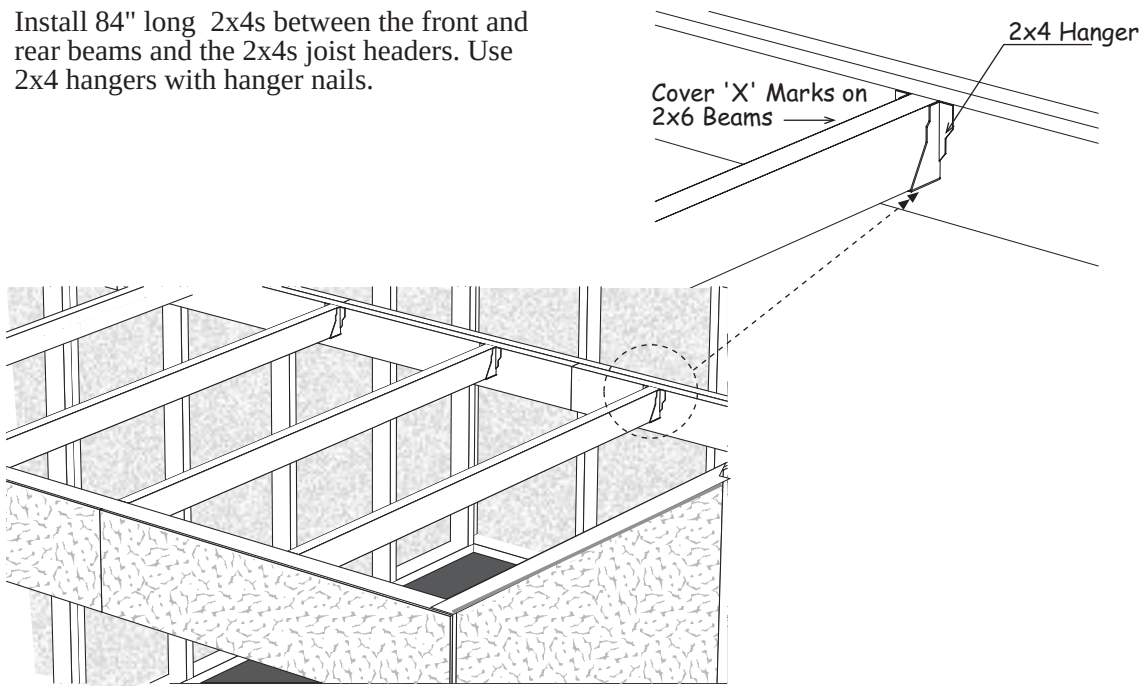
Place the notch under the top plate and support the beam by cutting a pre-cut wall stud and placing under the beam. Further secure the beam with a 3" wood screw through the top of the wall plate.



5. Repeat to Install the other beam with the 'X' marks on the beam facing the front wall. When the front beam is installed there will be 56" between the beams

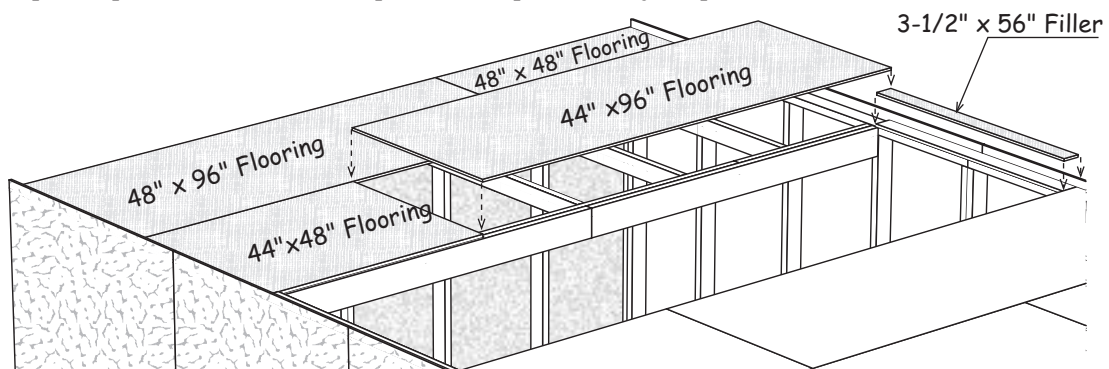
Step 15 Install Loft Floor Joists

Install 84" long 2x4s between the front and rear beams and the 2x4s joist headers. Use 2x4 hangers with hanger nails.



Step 16 Install Loft Flooring

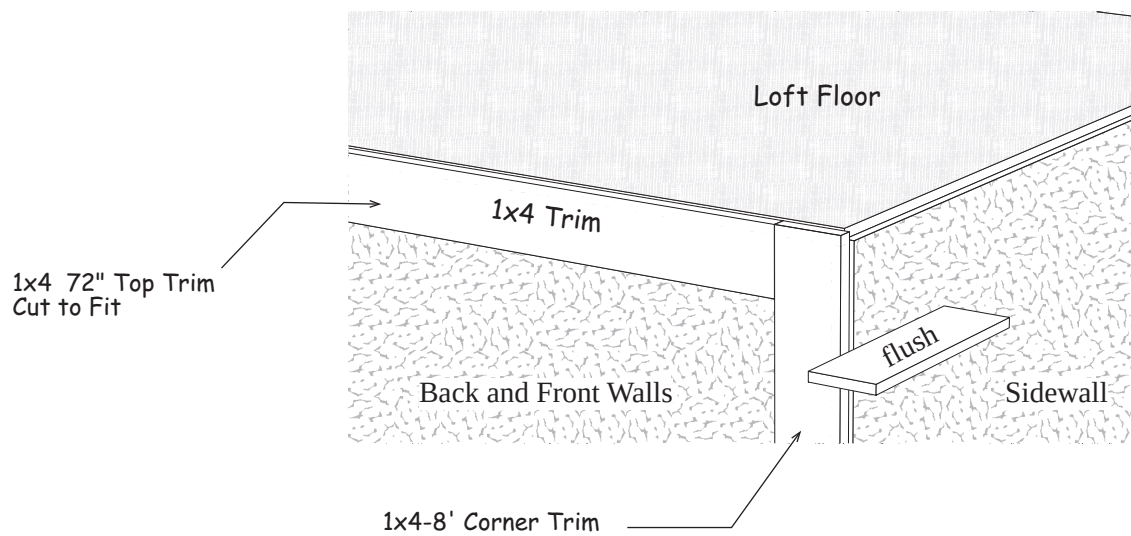
1. Install 7/16" OSB loft flooring on back loft floor joists. Loft flooring is flush with outside of top wall plate. Use 7d sinkers spaced 12" apart. *See layout pattern below:*



2. Repeat to install loft flooring at the front of the building.
3. Install 3-1/2" x 56" floor fillers on top of side wall plates between the loft flooring.

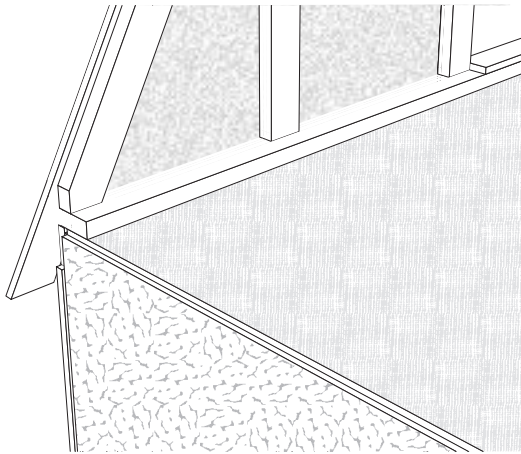
Step 17 Install Wall Trim

1. Install (2) two 1x4-8' corner trim on the back wall, flush with the siding on the sidewall and flush with the top of the loft flooring. Use 8d galv. nails.
2. Install (2) two 1x4-72" trim boards across the top of the back wall. Cut to fit. Install the 1x4 boards flush with the top of the loft flooring. *See diagram below.*
3. Repeat steps for front wall trim.

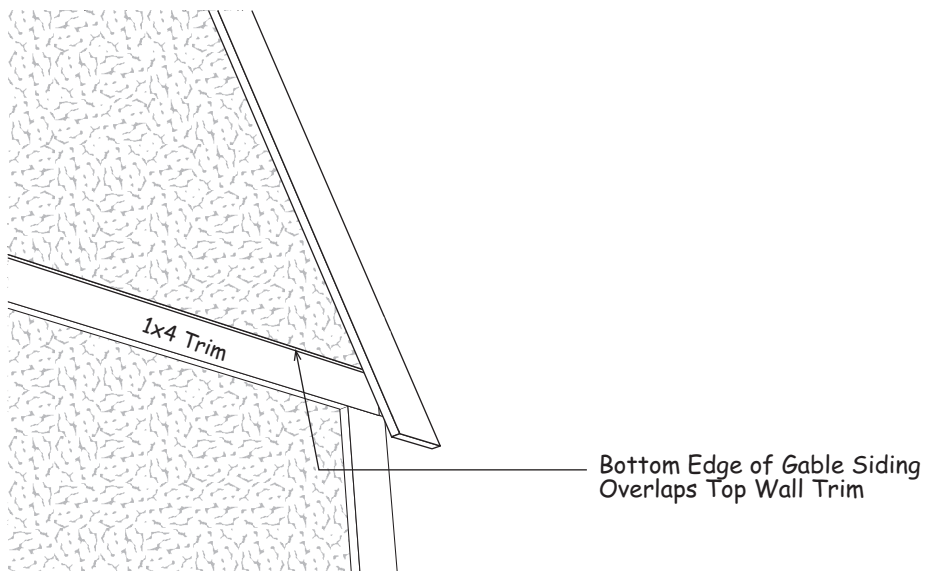


Step 18 Set Rear and Front Gables

1. Install the rear gable on the rear wall. The siding on the gable must extend over the 1x4 trim board, not behind it. *See detail below.* Nail gable to loft flooring. Use 10d nails.



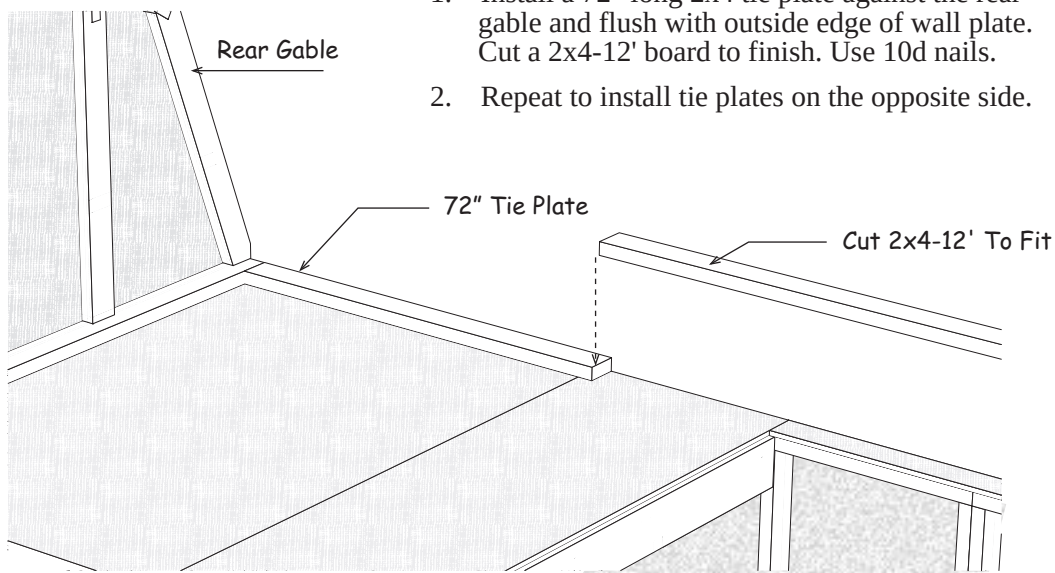
WARNING: The gable ends are heavy and awkward. You'll need helpers to lift and set gables in place.



Rear Gable & Wall

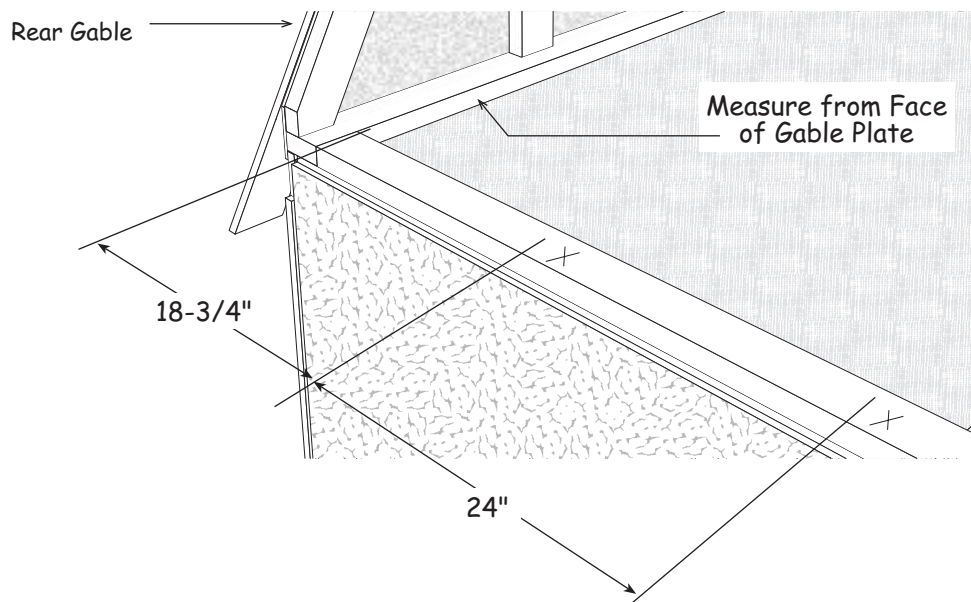
Step 19 Install 2x4 Truss Plates

1. Install a 72" long 2x4 tie plate against the rear gable and flush with outside edge of wall plate. Cut a 2x4-12' board to finish. Use 10d nails.
2. Repeat to install tie plates on the opposite side.



3. Layout the truss spacing. Measure from the inside face of the 2x4 gable plate to mark the location of the first truss. The last truss space will be more than 24".

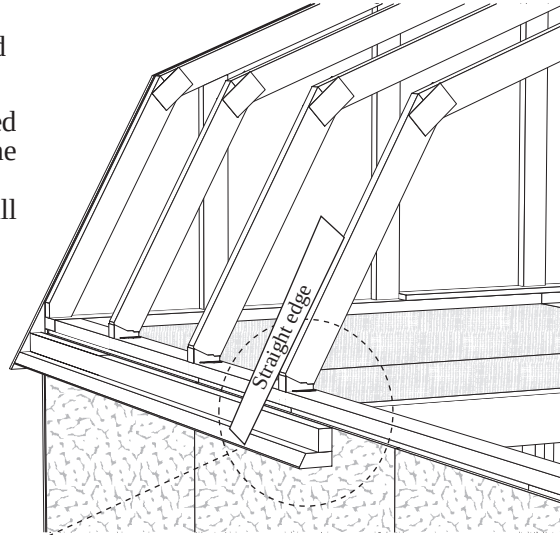
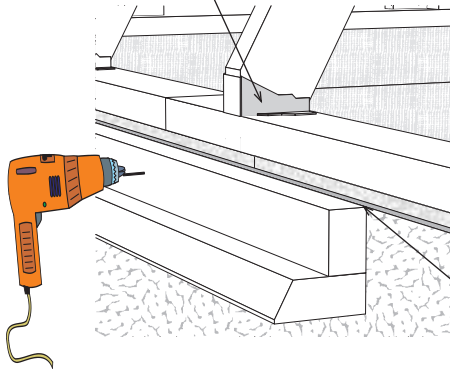
Important: When marking the opposite wall, place the 'X' mark on the same side of the line so your trusses are parallel when they are installed.



Step 20 Install Trusses & Soffit Boards

1. Place trusses over the 'X' marks and secure trusses to 2x4 tie plate using 2x4 hangers and 1-1/2" hanger nails.
2. Locate 84" long soffit boards that have a beveled edge. Install one of these boards flush with the top of the siding and butting against the rear gable trim. Secure soffit boards to the top wall plate with 3" long screws. Cut to length and install the last soffit board to fit behind 2x3 boards on the front gable.

Metal Truss Hanger



Before installing the overhang to the sidewall, use a straight edge to make sure the trusses are align with the bevel cut on the overhang board. Adjust up or down if necessary.

Soffit Board Flush With Siding

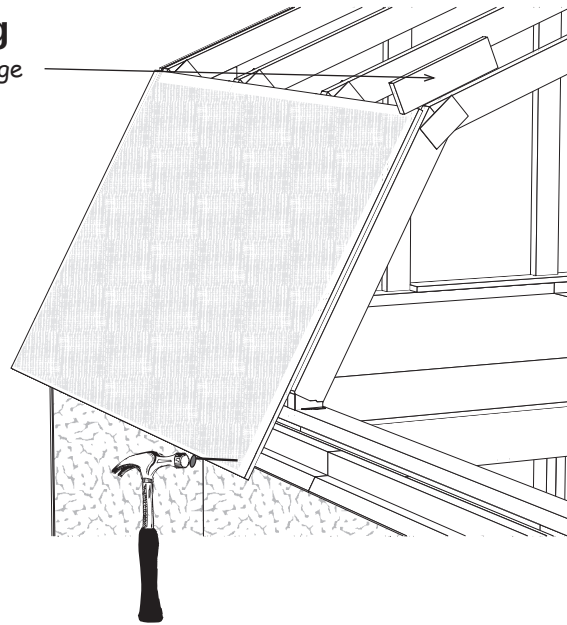
Step 21 Install Roof Sheathing

Straight Edge

1. Install a 42" x 96" OSB roof panel flush with the face of the rear gable trim. Use a straight edge to align the top of the sheathing with the top of the truss. Continue adding sheathing following the layout on the next page. Use 7d sinkers, spaced 12" apart.
2. Repeat step for opposite side.

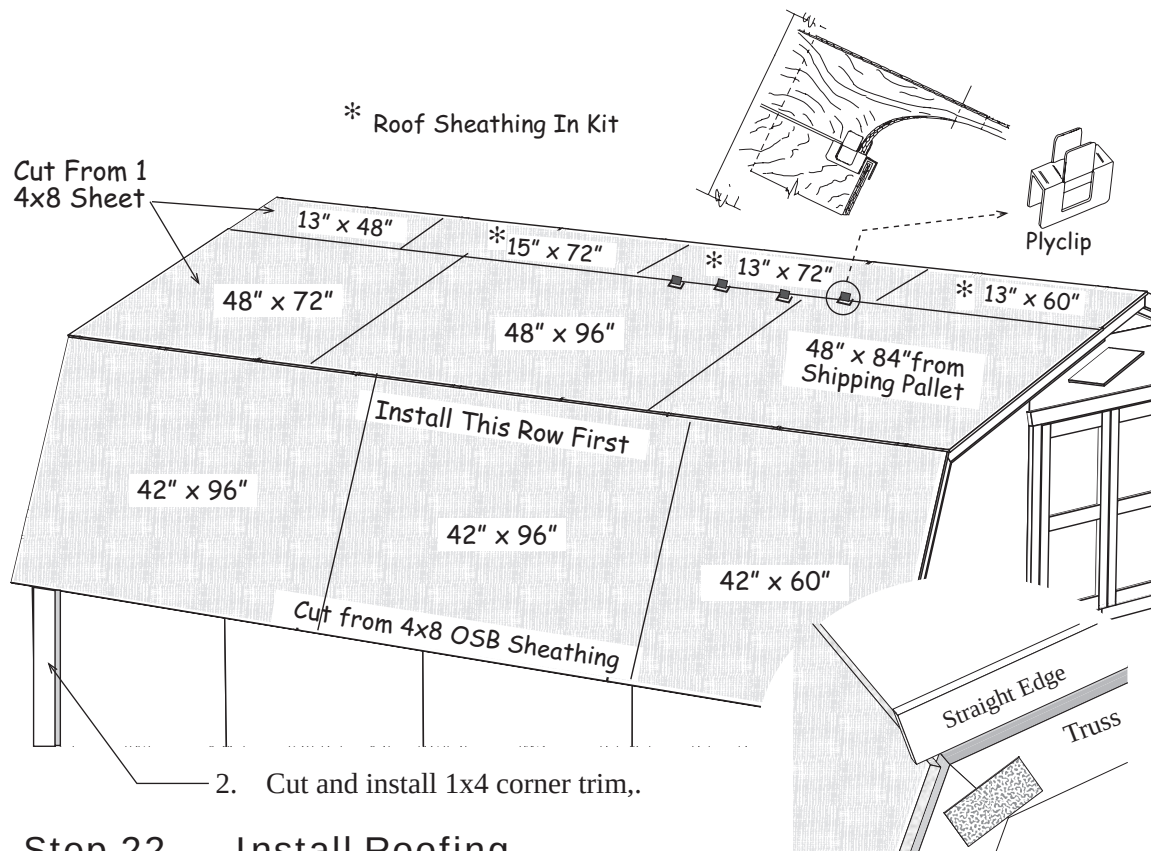


To prevent the nails from protruding through the bottom of the soffit board, do not nail at an angle when nailing roof sheathing to the soffit boards.



Step 21 Install Roof Sheathing Continued

1. Install roof sheathing flush with the face of the rear gable trim. Install the lower sheathing first. Use a straight edge to align the top of the sheathing with the top of the truss. See Detail 'B'. Insert (2) two plyclips into the roof sheathing between each truss at the top row. Use 7d sinkers, spaced 12" apart.



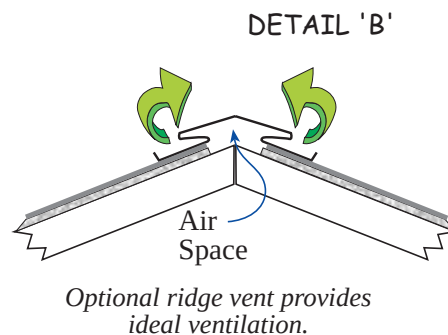
2. Cut and install 1x4 corner trim,,.

Step 22 Install Roofing — Not Supplied in Kit

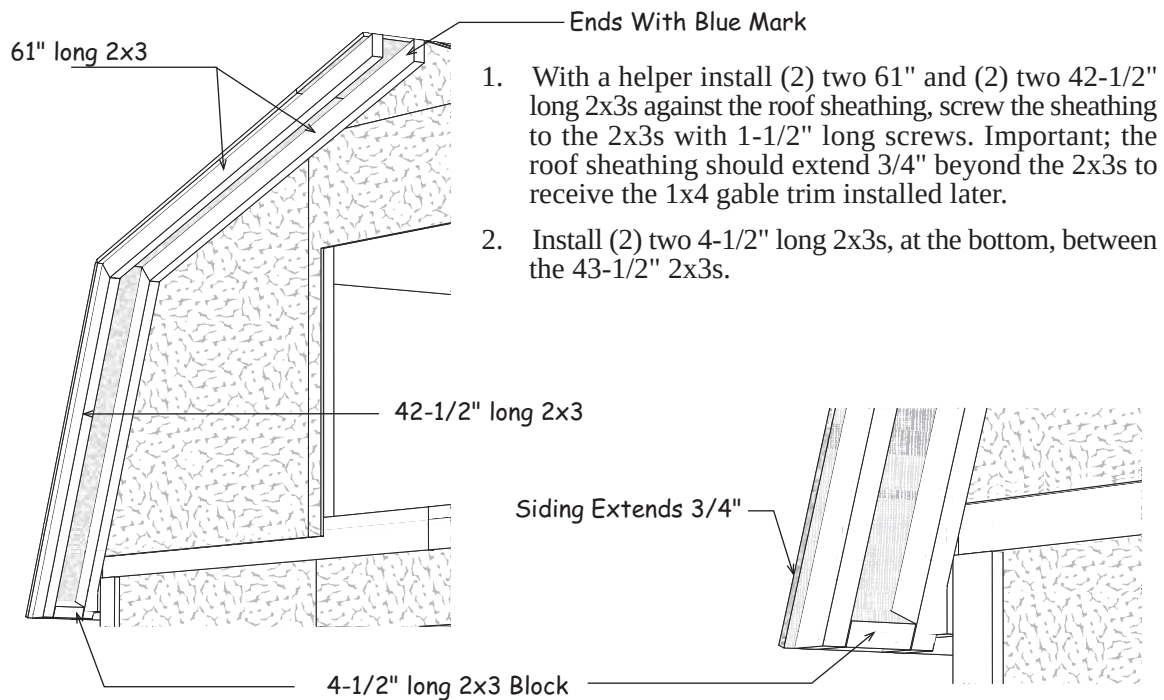
Install metal roof edging perimeter of the roof area. If you are not installing shingles at this time, you can purchase felt paper to protect the sheathing. Install the felt paper before you install the metal roof edge.

Install shingles according to the instructions on the wrapper. If you need more detailed instructions on installing shingles, there are good publications at book stores or newsstands.

Building Tip: Install ridge vent in lieu of shingles caps. Ridge vent provides ideal ventilation, preventing heat and moisture from damaging your building or its contents.

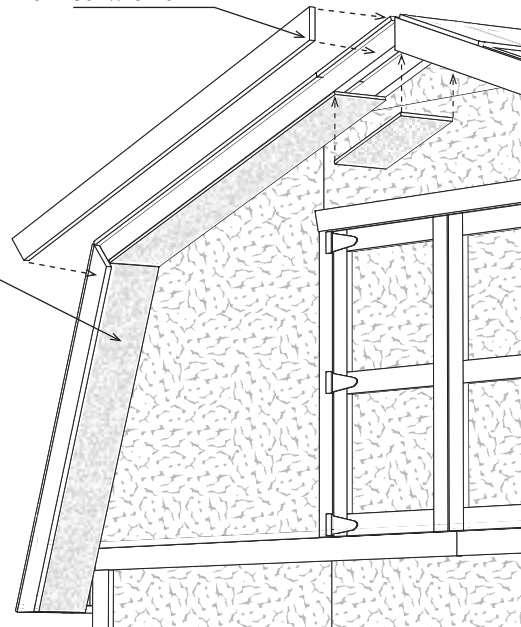


Step 23 Install Front Gable Overhang



3. Install (2) two 1x4-64" gable trim, with the ends marked with a blue line, together at the ridge.

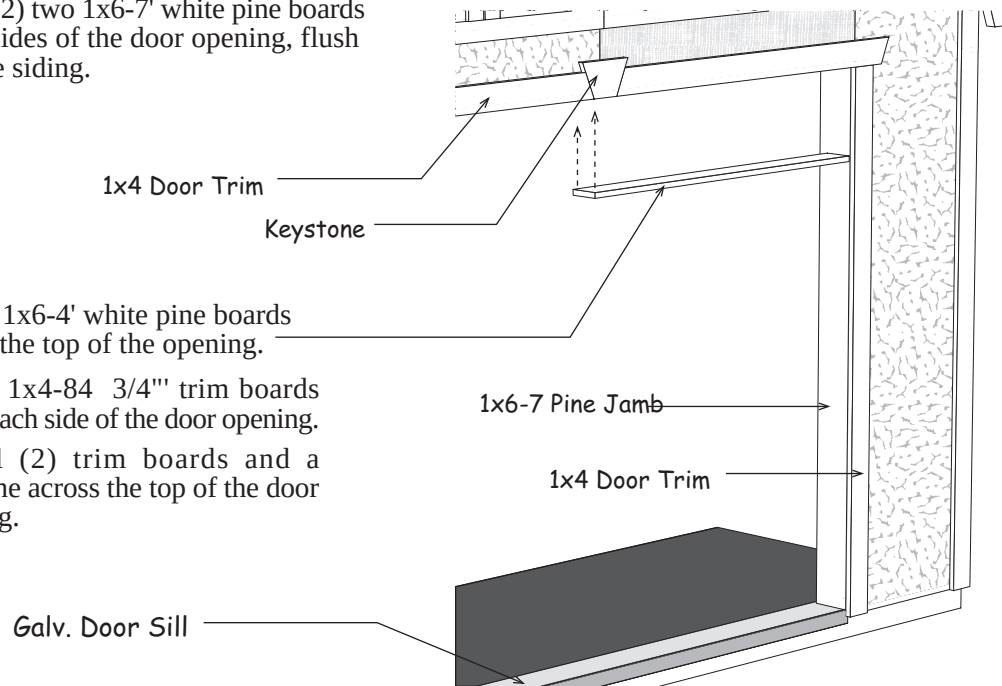
4. Install (2) two 43-1/2" long 1x4 trim boards on the sides.
5. Install 9" wide soffit panels under the overhang. Use 6d galv. nails.
6. Install 35-3/4" long 1x3 trim boards flush with each side of the loft door opening. Install a 50" long trim board across the top. *If door opening is cut out the siding will extend 3/4" below the top trim board.*
7. Install loft doors using 4" hinges and 1-1/4" long hinge screws. Install barrel bolt to the back of the right door to prevent door from opening.



Step 24 Install Door Jamb & Trim

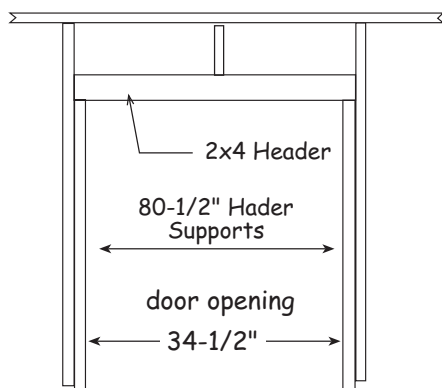
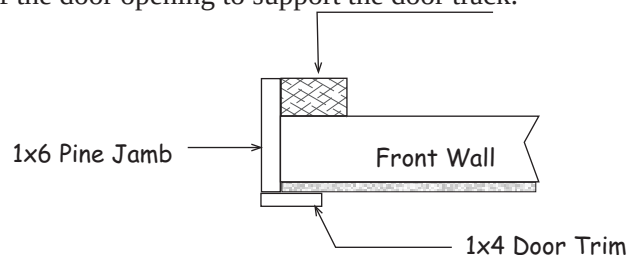
1. If you ordered the optional floor, install the galvanized door sill included with the floor. Secure sill with pan head screws.

2. Install (2) two 1x6-7' white pine boards on the sides of the door opening, flush with the siding.



3. Install 1x6-4' white pine boards across the top of the opening.
4. Install 1x4-84 3/4" trim boards along each side of the door opening.
5. Install (2) trim boards and a keystone across the top of the door opening.

6. Install 92-5/8" long 2x4s on the inside of the door opening to support the door track.
7. Cut 2x4s used for wall bracing and install 2x4s across the top of the door opening.



Frame Optional Walk-in Door Opening

1. Cut (2) two 80-1/2" long header supports from pre-cut wall studs.
2. Cut (2) two 2x4s to a length of 37-1/2" from a pre-cut wall stud. Cut a filler from a 3-1/2" x 48" OSB board and assemble a door header.
3. Install door header over header supports.

Tahoe 12'x 20'

Qty.	2x4 Framing	Size
12	Wall Plates	72 "
8	Wall Plates	68 1/2"
10	Loft Floor Joist	84 "
8	Wall & Tie Plate Material	48 "
2	Gable Studs	45 "
4	Gable Studs	40 3/4
4	Gable Studs	30 3/4
	2x6 Framing	
6	Beam Material	72 "
4	Beam Material	36 "
	2x3 Framing	
4	Gable Extension <i>top</i>	61 "
4	Gable Extension <i>side</i>	42 1/2"
2	Gable Extension Blocks	4 1/2"
11	Truss Ridge Blocks	31 3/4"
	Miscellaneous Lumber	
8	24 Blocks for Truss Jig	10" to 12"
2	OSB Door Header Filler	9" x 48"
2	OSB Door Header Filler	3-1/2" x 48"
2	7/16" Loft Floor Fillers	3-1/2" x 56"
18	Wood Gussets for Trusses	9" x 32"
	OSB Roof Sheathing	
2	48" x 84"	2 13" x 60"
4	13" x 72"	
	LP Siding for Front Soffit	
5	Pcs. 9" wide x 48" long	

Packing List

28-Apr-2015

Qty.	White Pine Trim	Size
4	1x4 Gable Trim	61 "
4	1x4 Gable Trim	42 1/2"
4	1x4 Lower Wall Trim	72 "
1	1x4 Door Trim	84 3/4"
2	1x4 Door Trim	48 3/4"
1	1x3 Loft Door Trim	50 "
2	1x3 Loft Door Trim	35 3/4"
1	1x6 9" Keystone top center trim	
	Pre-built Components	
22	Pre-built Truss Halves	
6	3-1/2" x 84" Pre-built Soffit Boards	
2	21" x 35-1/2" Loft Door Frames	
	Hardware	
6	lb. 10d Sinkers	42 7/16" Plyclips
4	lb. 8d Galv.	2 Bottle Glue
4	lb. 7d Sinkers	
4	lb. 6d Common	28 Truss Hangers
1	lb. 6d Galv.	1 Door Hasp
3	lb. Hanger Nails	2 Barrell Bolts
14	1x4 Drive-on Plate	120 2-1/2" Screws
6	4" Door Hinges	64 Drywall Screws
	LP Primed Siding	
2	Pcs. Gable Siding 48" wide x 55" angle cut	
4	Pcs. Gable Siding 24" wide x 36" angle cut	
2	Pcs. Door Header Siding 48" wide x 10"	
	White Pine Door Jamb	
2	5-1/2" x 84"	2 5-1/2" x 48"

Material Supplied by Local Home Center

14	pcs.	LP Primed Exterior Siding	8	pcs.	1x4 - 8' White Pine Trim
16	pcs.	7/16" OSB Sheathing	6	pcs.	2x4 - 12" Boards
50	pcs.	Pre-cut Wall Studs 92-5/8"	2	pcs.	2x10 - 10" Boards

Roof Covering: 14 bundle shingles - 9 pcs. roof edge - optional felt paper 1 roll